PRELIMINARY SURVEY OF MARKETS AND PRICES OF FOREST PRODUCTS IN THE DEL-MAR-VA PENINSULA

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INTRODUCTION

This preliminary survey was designed to explore the present methods of marketing farm forest products and the problems involved in collecting price information about primary forest products. No attempt was made to initiate a permanent price-reporting service, since that was beyond the scope of the survey. However, certain price information was obtained; it is shown in table 2 of this report.

DESCRIPTION

The Del-Mar-Va Peninsula includes most of the State of Delaware, the eight Maryland counties that lie on the so-called "Eastern Shore" of Chesapeake Bay, and the two detached counties of Virginia[1] located at its southern tip.

[1] Not included in this study.

Table 1.--Number of farms, by type, and value of products sold, Del-Mar-Va Peninsula, 1944

Type of farm[1]	Number of farms	Value of products sold	
		Thousand dollars	Percent
Farms producing primarily for sale:			
Fruit and nut	291	2,353	2
Vegetable	3,317	7,903	6
Horticultural specialty	89	1,386	1
All other crops	1,531	4,786	4
Dairy	2,049	10,802	9
Poultry	5,712	78,601	64
Livestock	376	1,282	1
Forest products	40	94	(2/)
General	3,273	15,219	12
Total	16,670	122,426	99
Farms producing primarily for household use	2,969	1,081	1
All farms	19,639	123,507	100

[1]All producing farms were classified by the Census into two primary types: If the "value of products sold" exceeded the "value of products used by the farm's own household" it was classed as a farm producing primarily for sale. This type was broken down further according to the class of products that represented 50 percent or more of the value of products sold. If no one class represented 50 percent it was called a "general" farm.

[2]0.08 percent.

Source: Census of Agriculture 1945.

The farm economy of this area is rather highly specialized, with poultry and poultry products in the leading role (table 1). Of the total value of products sold by all farms in the area, 64 percent comes from those that list poultry as their chief products.[2] Since the larger poultry farms produce little else and many others engage in poultry as a

[2]It represented more than 50 percent of the value of products sold.

sideline, it is quite possible that more than two-thirds of the total value of farm products sold is in poultry and poultry products. Dairying and vegetable production are the other two important types of farming.

The classification of farms according to type of product that represents more than 50 percent of the value of products sold does scant justice to forest products. The 40 farms classified by the Census as "forest-products" farms were, for the most part, ordinary farms that happened to sell timber in 1944. The truer picture of the farm woodland situation is summarized as follows:

Total land area	3,205,760 acres
Area in farm woodlands	591,099 acres
Percent of total area in farm woodlands	18.4 percent
Number of farms producing primarily for sale	122,426 farms
Number of farms selling forest products	482 farms
Percent of farms that sold forest products	0.4 percent
Total value of farm products sold	$117,875,931
Value of forest products sold	$268,544
Percent of total value in forest products	0.2 percent
Average value of forest products per farm making such sales	$557
Value of forest products sold per acre of total farm woodland	$0.45

Although the number of farms selling forest products was a very small part of the total (0.4 percent), the average proceeds received per farm making such sales was comparatively high--$557. However, the average of 45 cents per acre of total woodland is rather low when compared with the northern New England States where the average ranges from $1.18 to $2.38.

Considering only those farms containing woodland acreage, it was found that fewer than 4 percent sold forest products in 1944. This also is low when compared with the northern New England States, where 26 percent of the farms containing woodland acreage reported sales of forest products in 1944. The county-by-county pattern is shown in figures 1, 2, and 3.

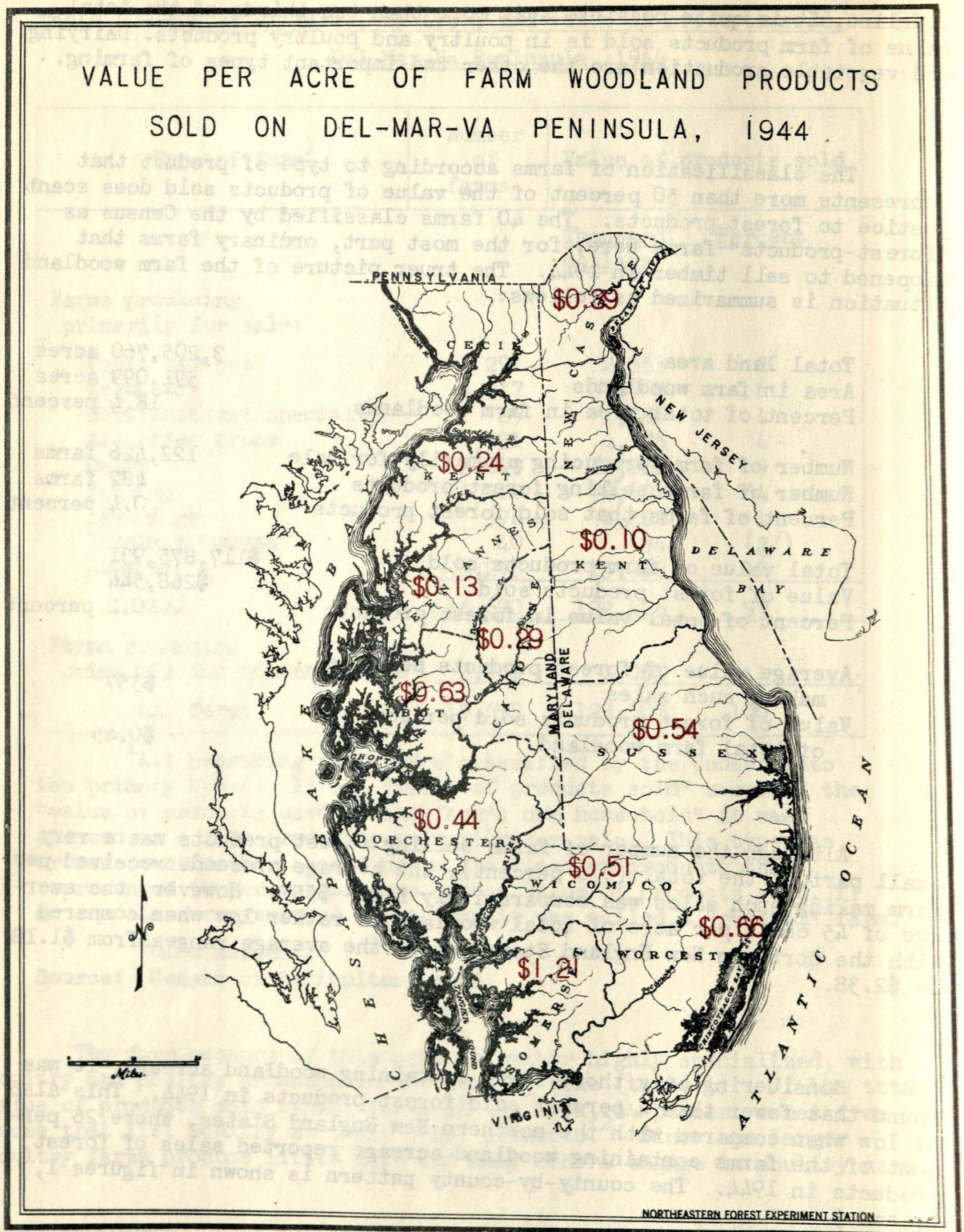

Figure 1.—The average income from farm woods (based on the total acreage of farm woodland in each county) was only 45 cents per acre. Data from Census of Agriculture, 1945.

The farm woods of the Del-Mar-Va Peninsula should be producing many more forest products than they did in 1944. Potentially, this section is one of the best timber-growing areas in the country.

The peninsula has two main forest types. Loblolly pine predominates in the south and an oak type in the northern part. The pine type extends north to a line running from Milford, Delaware, to just south of Easton, Maryland.

Larger forest holdings predominate in the south, while the north is mostly in farm woods. A little more than one-third of the entire land area is in timber. Percentage of land area in woodland varies considerably by counties, the southern counties having the most.

PRESENT MARKETS

The main primary forest products of the peninsula are lumber, veneer, piling, pulpwood, and excelsior wood. Minor products are fuel wood, mine props, fish-pond poles, ship timbers, and holly.

Approximately three hundred sawmills are in operation. These vary from small mills operated by farmers, who produce only for their own use, to larger circular mills that produce up to 10,000 board feet per day. Competition for good saw timber is keen. Lumber is sold locally and in the metropolitan markets in Philadelphia, Wilmington, Baltimore, and other nearby cities.

Saw-timber stumpage is usually bought by the boundary for a lump sum. Otherwise it is bought by mill tally or on a forester's estimate. Sawlogs are bought on log scale or mill tally. Log scales used are Doyle, Scribner, One-half Diameter, and International $\frac{1}{4}$-inch.

There are approximately ten plants that use container-grade veneer for the manufacture of hampers, baskets, and crates. These utilize red and black gum, yellowpoplar, maple, beech, birch, and a small amount of oak. Pine lumber is also used in making these containers. Many of the veneer logs used by these plants are imported. Because of recent poor

Figure 2.—Fewer than 4 percent of the farms that have woodlands sold forest products in 1944. Data from Census of Agriculture, 1945.

harvests and subsequent small demand for baskets, container-grade veneer is not in great demand now. The present lack of demand is probably only temporary. Veneer logs are bought on log scale, Doyle. Some mills require various bolt lengths; others accept any log length.

There are 10 or 12 operators who produce piling. Pine is the principal species used. However, a few oak pilings are produced. There are two creosoting plants on the peninsula. One, near Salisbury, Maryland, does not receive sufficient local piling for fullscale production and thus is forced to import pine piling. Most of the piling is shipped to the metropolitan areas. Piling stumpage is bought by the tree or by the linear foot.

Two excelsior plants, three pulp and paper companies, and one feltwood company compete for the pine cordwood produced here. The excelsior plants use approximately 5,000 cords a year. The paper and feltwood companies are unable to buy anywhere near as much pine cordwood as they would like. Together they probably managed to buy less than 10,000 cords in 1948. A 4 by 5 by 8-foot unit is the usual one used in buying these products. However, some pulpwood is bought by the 6 by 5 by 6-foot unit. Pine cordwood stumpage is bought by lump sum or by unit.

The demand for fuel wood has fallen in recent years because of the large number of coal and oil furnaces that have been installed. Many of the low-income residents burn coal instead of wood in their heating and cooking stoves. The end of coal and oil shortages will cause a further decline in the use of fuel wood, provided personal incomes remain high enough for rural families to afford the conveniences of coal and oil heat and bottled gas for cooking.

The small canneries located in the area switch from wood fuel to coal and back. When labor becomes plentiful their use of fuel wood will increase. The slabs from sawmill operations furnish practically all of the fuel wood now used. Readily accessible mills are still able to dispose of slabs in this manner. Slab fuel wood is sold on the basis of a 160-cubic-foot unit thrown loose into a truck body. This is considered equivalent to the 128-cubic-foot cord of stacked wood.

Fish-pond poles and ship timbers are produced in very small quantities for local markets. Slack cooperage barrels and half-barrels are made for the oyster and crab industry. The poultry packing industry also

Figure 3.--The farms that sold forest products in 1944 realized neat profits from their woodlands--an average of $557. Data from Census of Agriculture, 1945.

uses considerable slack cooperage. One or two operators produce pine mine props. These props are trucked to the anthracite coal field in Pennsylvania. Mine-prop stumpage is bought by the boundary for a lump sum, or by the ton.

In common with many other regions, the Del-Mar-Va Peninsula lacks markets to absorb all of the low-grade hardwood material available. This is especially true in the pine area, where many operators will not pay for and often do not cut the hardwoods in the predominantly pine stands. Since the hardwoods are often so defective as to be worthless, they have acquired such a poor reputation that even the better-quality trees are often left in the woods. Instances of veneer-quality hardwoods being left on cutting operations within easy hauling distances of markets were observed. Other cases of operators' leaving white oak of a quality suitable for whiskey barrel staves were encountered. At least one market for white oak stave bolts is within hauling distance. Such practices are not only poor utilization but very poor management in a region where keeping the encroaching hardwoods out of the pine stands is a major problem.

QUALITY AND SPECIFICATIONS

Saw-timber stumpage and sawlogs are not sold on quality grade except for a general judgment by the operator when he appraises a tract. A few mills do pay a premium for especially large sawlogs. But only one operator was encountered who uses definite diameter classes for arriving at a value of sawlogs.

The quality specifications for piling stumpage seem to depend on the orders the operator has on hand. In every case encountered, the operator selected the trees he would accept for piling. Some operators have reputations for accepting much lower quality than others. It was not determined whether or not this is really the case. When the sales are on a linear-foot basis, the longer the tree, the more it will be worth. Piling stumpage is also sold on a per-tree basis. Of course the tree length has an influence on the per-tree price, but this system is similar to buying stumpage for a lump sum.

Pilings are cut to 5-, 6-, 7-, and 8-inch tops. Straightness of pile seems to be the other main specification (see appendix). However, number of growth rings per inch, amount of sapwood, and time of year when cut are sometimes considered.

Piling is sized by length and diameter, inside bark on the smallest axis, at the butt or at a specified distance from the butt. Example: A 12-2 is 12 inches in diameter 2 feet above the butt. Others measure the diameter at 3 or 4 feet above the butt. Thus the same pole could be in several size-classes, 13-0, 12-4, and so on--depending on the amount of taper at the large end.

Veneer-stock quality and specifications vary with the plants. Some plants buy on published grades, but these grades are not standardized (see appendix). Others buy by species only.

Pulpwood, excelsior wood, and felt wood specifications vary by species, diameter of bolt, and size of unit; but the specifications and quality are well known and easily understood. Hence they present only a minor problem.

The buying of large-size mine-prop stumpage on a weight basis poses a problem for the farmers who are not familiar with this method of measurement and are unable to convert it to a per-thousand-board-foot basis. Hence they must depend on the word of the operator or on a comparison of lump-sum offers. Only a small amount of mine props is produced on the peninsula.

AVAILABLE MARKET INFORMATION

There is no formal forest-products market information service on the Del-Mar-Va peninsula. The average farmer had only word-of-mouth information or the operator's word to rely on.

A few of the operators have market contacts in the metropolitan area. Others depend on their brokers for market information. However, the majority have only local information. This is often inadequate. Here is an example:

> One retail yard obtained a contract for pallets at $2.90 each. It subcontracted the work at $2.40 a pallet and acted only as a broker. Eventually the subcontractor accidentally learned the price the retail yard was receiving. He then obtained a direct contract. He said that in a few

months the retail yard had made $120,000. This is considerably higher than the normal brokerage commission. However, he said he is too busy getting out timber and piling to hunt up markets. Hence, he depends on local sources for his market information.

The metropolitan markets are strongly influenced by the prices of southern yellow pine lumber. Prices paid for pine lumber from the peninsula are usually higher than the going market prices for southern yellow pine lumber.

MARKETING METHODS

The amount of woods work done by farmers on the peninsula varies from those who do none to those who operate a sawmill when not farming. Some of the part-time operators saw only for themselves. Others make a definite part-time business of it. However, the majority of the farmers do no woods work. They believe they have a full-time job on the farm, think woods work too strenuous, don't have proper equipment, or feel they can make more money raising poultry.

Hence the major forest-products marketing activity engaged in by farmers is the selling of stumpage. This is done in several ways:

1. By offering timber for sale and inviting competition among logging operators.
2. By selecting one operator on his reputation and selling to him, at his price.
3. By public auction.
4. By having a friend--usually a sawmill operator--estimate the value.
5. By dickering with one operator to get the best price he can.
6. By selling to a mill and accepting payment according to mill tally.
7. By having the timber estimated and marked by a public forester.

From the farmer's viewpoint, all of these methods except the last have the same fault: few logging operators have the time or the special knowledge needed for making an accurate estimate of the volume and quality of the products offered for sale.

This fault affects the buyer as well as the seller. The risk the buyer takes under these methods is considerable unless he can buy the stumpage at an extremely low figure. Even under the most competitive conditions and with the most reputable operators, this high risk tends to hold prices down. The larger the tract or volume of stumpage involved, the greater the risk the operator must take. In addition, competition decreases when the smaller operators cannot raise the necessary money or cannot afford to take the increased risk. One case was noted where the farm woodland involved was so large that competition was practically eliminated. Unquestionably subdividing this tract would have resulted in increased competition and a higher stumpage price.

The mill-tally method of selling timber does reduce the risk involved, since the volume is then a known quantity. The smaller operators who sell their sawed products on a mill-run basis can thus reduce their risk to a minimum. Operators who sell their sawed products by grade still have to estimate the quality of the logs. Recognition of a slightly higher value is the extent of quality recognition.

Even though the mill-tally method reduces the operator's risk, this method is not popular among the operators because of the many chances for misunderstandings and resultant loss of reputation. Timber owners seldom favor this method for one or more of the following reasons: (1) they prefer a lump-sum of cash rather than deferred payment, (2) a few unscrupulous operators have given the method a bad name, and (3) absentee and busy owners do not have the opportunity to protect their interests by checking on the operators.

The last method--having the stumpage estimated and marked by public foresters--is undoubtedly the best. It is slowly increasing in popularity. However, considerably less than 10 percent of the total stumpage on the peninsula is sold on this basis. This is partly due to the timber owners' not being aware of such services or their financial advantages. Many operators have not been convinced that such estimates are reliable, they do not understand or like the management practices involved, or prefer to take chances on making higher profits under the present disorganized system.

A local consulting forester, who is also a sawmill operator, stated that he obtained very few consulting jobs on the peninsula. He expressed the opinion that private foresters would be unable to make a living on the peninsula until the use of trained foresters became the general practice, accepted by landowners and operators alike.

Of 10 woodland owners who had sold forest products recently, only two had any knowledge of how to estimate the volume or value of what they had sold. Not one of the 10 was acquainted with the merits of various log rules. Only two had heard of the estimating and marking services offered by the public foresters.

Timber-sale contracts are usually not sufficient to insure the owners against unfair practices. Several sawmill operators expressed the opinion that the woodland owner should insist on a written contract that would protect his own interests. The Delaware State Forester mentioned several cases where the contracts were inadequate. Both Delaware and Maryland offer sample contracts, but evidentally these are not widely used.

Poorly manufactured lumber causes a local broker considerable trouble and expense in selling it. One operator who saws and sells his hardwood lumber on grade, as well as manufacturing it carefully, has established a reputation in the metropolitan markets in a very short time. He received premium prices and has found a ready market.

Lumber prices received by the operators often vary as much or more than stumpage prices. This is due, at least in part, to poor manufacturing and inadequate market information.

PRICES

The general lack of anything that resembles an orderly market for farm woodland stumpage and products makes it extremely difficult to collect significant price information. A farmer sells the timber on his woodlot not knowing either the acreage or the volume that it contains. An operator buys it on a lump-sum basis without any cruise or anything more than his own estimate of the volume, based on a rough inspection of the tract. He may not even scale the timber after it is cut, and may never know how much was removed from the lot. The price that is offered, on the other hand, is often just what the buyer thinks that the owner may be willing to take; and this may have little or no kinship to any volume and price estimate.

Any attempt to derive an accurate price estimate from transactions of this kind is like searching in the dark. Not all sales are of this character, but 3 weeks of vigorous field work revealed few sales that had been made on a volume basis. The price data obtained probably indicate the approximate range of prices from high to low. Much more time and effort would be necessary to develop a reasonably satisfactory weighted average of prices. A market news service that did contain average price data would be a powerful influence in reducing the present spread of lowest and highest prices. It would certainly encourage more reliable methods of arriving at estimates of timber value.

The price information that was collected is summarized in table 2.

PRICE-REPORTING SERVICE FEASIBLE

This preparatory study indicates that a satisfactory price-reporting service could be established on the Del-Mar-Va Peninsula. However, because of the previously mentioned difficulties in obtaining prices related to volume in reporting classes, the job would require a considerable amount of preparatory and maintenance work.

The contacts made with operators during this study indicate that 40 percent of the operators will provide price information readily. Twenty percent will probably do so with some persuasion. Fifteen percent will not have price information. Obtaining prices from the remaining 25 percent would be difficult.

Much of the stumpage-price information received could not be utilized in obtaining a weighted average price because an adequate estimate of volume was not obtainable. In other cases it would be difficult to classify the price information. This would be especially true for veneer and piling.

It is believed that many operators would have to be contacted several times before it would be possible to obtain reliable production and price information from them. This is borne out by the experience of the Bureau of Agricultural Economics in collecting price information on the Eastern Shore. The Maryland State Department of Markets had the same experience when starting its price-reporting service for poultry on

the Del-Mar-Va Peninsula. Both agencies stressed the importance of repeated contacts to establish and maintain a personal relationship with the cooperators. The personal knowledge of the operators would aid in classifying and interpreting the data received. It is especially important to have reliable prices for the first few issues to establish the reputation of a market news service. There is doubt about the possibility of collecting reliable information by mail or telephone until the service is well established.

When the Bureau of Agricultural Economics began collecting price information on the Del-Mar-Va Peninsula, approximately 2 man-months, distributed over a 4-month period, was devoted to contacting the cooperators before issuing a price report. Approximately 80 cooperators were enlisted. It is estimated that, to receive a sufficient number of samples (25 to 30) for each item listed in a forest-products news service, it would be necessary to receive reports from approximately 100 operators. This estimate is based on the amount of price information received from 22 operator contacts.

The following is indicative of the time necessary to make operator contacts in establishing a price news service. In 84 hours 48 contacts with operators were attempted and, of these, 22 were accomplished. This was an average of just more than two operator contacts per man-day. Because of limited time it was necessary to distribute the contacts over the entire peninsula. In contacting all of the operators the work would be more concentrated. Hence, three operator contacts per man-day would be a fair average in the initial contacts for a price news service. After becoming acquainted with the mill locations and operators' habits, subsequent contacts could probably be made at the rate of 4 to 5 per man-day. The Forest Service wartime lumber-production survey indicated that after the survey was well established, six operator contacts per man-day were possible.

The following is an example of the organization and methodology that would be required to establish and maintain a monthly service. Forest industries with a limited number of plants or representatives would be contacted 100 percent, monthly. This would include veneer, piling, excelsior, pulpwood, mine prop, and other small industries in the area. A sample, 25 percent, of the 300 sawmills could be selected at random by production classes. After initial contacts, all of the above operators, approximately 110, could be placed on a mailing list. The Forest Service wartime canvasses indicate that possibly 50 percent of the mills on the mailing list will cooperate by sending in the information. The others would have to be contacted monthly. In addition, a small sample of the sawmills not on the mailing list should be contacted monthly.

Table 2:--Price range of specified forest products in the Del-Mar-Va Peninsula, 1948[1]

Product	Unit	Low Price	High Price
Stumpage			
Saw timber, loblolly pine	M bd. ft.	$10.00	$23.00
" " red oak, white oak	"	13.00	20.00
" " walnut	"	25.00	25.00
Pulpwood, pine	Unit[2]	1.00	3.00
Piling, pine up to 60 feet	Linear ft.	.05	.10
" pine over 60 feet	" "	.10	.12
Mine props, pine	Ton	2.50	2.50
Sawlogs delivered at mill			
Pine	M bd. ft.	18.00	37.00
Red oak, white oak	"	18.00	45.00
Walnut	"	40.00	45.00
Veneer logs delivered at mill			
Red gum	M bd. ft.	24.00	48.00
Yellowpoplar	"	32.00	56.00
Others	"	24.00	40.00
Piling, pine, peeled[3]			
On cars, trucks or at plant			
Up to 60 feet in length	Linear ft.	.15	.30
60 feet and more in length	" "	.30	.35
Delivered to Philadelphia			
Up to 60 feet in length	" "	.25	.40
60 feet and more in length	" "	.40	.60
Pulpwood, on car or dock			
Pine, rough	Unit[2]	12.00	14.00
Pine, peeled	"	16.00	17.00
Gum and poplar, rough	"	11.68	11.68

Table 2:—(Continued)

Product	Unit	Low Price	High Price
Excelsior wood, delivered at mill			
Pine, rough	Unit[2]	$12.00	$14.00
Fuel wood, slabs, stove-length[4]			
At mill	Unit[2]	4.00	9.00
Delivered	"	6.00	12.00
Custom sawing			
Softwoods	M bd.ft.	10.00	15.00
Hardwoods	" " "	14.00	18.00

[1]Method used to convert various log rules to a common basis: Assuming that the average log for the Del-Mar-Va Peninsula is 12 feet long and 13 inches at the small end. International log rule and mill tally were considered equal.

Bd. ft.	Rule	Percent	Converting Factor
85	Mill tally	100	1.00
85	International	100	1.00
73	Scribner	86	1.16
61	Doyle	72	1.39
85	Diameter by ½	100	1.00

For veneer logs the average used was 12 feet long and 18 inches at the small end. International log rule and mill tally are equal.

Bd. ft.	Rule	Percent	Converting Factor
185	Mill tally	100	1.00
185	International	100	1.00
147	Doyle	80	1.26

[2]160-cubic-foot unit. Fuel wood is loose-packed.

[3]Prices for unpeeled piling are 4cents to 6 cents lower.

[4]Fall demand just beginning. Price and demand will increase as temperature drops.

The original contacts would require 2 man-months. Recontacts--two per operator before beginning publication--would require 3 man-months. Maintaining the service on a monthly report basis would require the full-time services of one man. His time would be distributed as follows: 2 man-weeks monthly contacting operators on the mailing list, 1 man-week contacting a sample of the sawmills not on the mailing list, 1 man-week in tabulation and office procedures. Part-time clerical help would also be necessary.

This example compares favorably with the 4 man-months expended in collecting information for the "Forest Market Report" issued by the State of New Hampshire in 1947-48.

Many operators were interested in current prices in the metropolitan markets. A price-news service covering these markets would not only help the operators but would be a good instrument in obtaining and maintaining their cooperation in providing data for a primary forest-products market news service. This would be comparable to the Extension Service's Poultry Price Report. When collecting local prices, this service provides the cooperator with metropolitan market news. Furthermore, such market news would give the local foresters a reliable basis for computing the value of stumpage. It would unquestionably aid both the owners and the operators.

SUMMARY

1. Potentially the Del-Mar-Va Peninsula is among the best timber-producing sections of the country. However, the woodland owner is receiving only a fraction of the cash return that he should receive.

2. The average woodland owner is not interested in deriving income from working in his woodlot.

3. Ample markets for all forest products except low-grade hardwoods are readily available.

4. Present hardwood markets are not fully utilized because of the poor reputation of hardwoods in the pine region.

5. The selling of stumpage is the major forest-products marketing activity engaged in by the timber-land owners. Methods normally used are haphazard, with high risks for the operator and/or low stumpage prices.

6. There is no formal price-reporting service of forest products on the peninsula. Although requiring considerable time and effort, a price-reporting service could be developed. It could be a powerful influence in reducing the present spread of prices, and it could encourage more reliable methods of arriving at estimates of timber value.

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APPENDIX

Table 3--Distribution of farm woodland in Del-Mar-Va Peninsula counties of Delaware and Maryland, 1945 22

Table 4--Value of farm and forest products sold in Del-Mar-Va Peninsula counties of Delaware and Maryland, 1944 23

Table 5--Average per-farm value of forest products sold by farms in Del-Mar-Va Peninsula counties of Delaware and Maryland, 1944 24

Table 6--Number of farms with woodland acreage, number selling forest products in 1944, percent of those having woodlands that sold forest products in 1944, Del-Mar-Va Peninsula counties of Delaware and Maryland 25

Sample specifications for piling 26

Sample specifications for container veneer logs 27

Table 3:--Distribution of farm woodland in Del-Mar-Va Peninsula counties of Delaware and Maryland, 1945

State and county	Total land area	Farm woodland area	Percent in farm woodland
	Acres	Acres	Percent
In Delaware:			
Kent	380,800	75,529	19.8
New Castle	279,680	31,394	11.2
Sussex	604,440	125,306	20.7
Total	1,265,920	232,229	18.3
In Maryland:			
Caroline	204,800	52,735	25.7
Dorchester	371,200	68,016	18.3
Kent	181,760	25,782	14.2
Queen Annes	238,720	44,164	18.5
Somerset	212,480	34,823	16.4
Talbot	178,560	37,831	21.2
Worcester	309,120	57,858	18.7
Wicomico	243,200	37,661	15.5
Total	1,939,840	358,870	18.4
All counties	3,205,760	591,099	18.4

Source: Census of Agriculture 1945.

Table 4.--Value of farm and forest products sold in Del-Mar-Va Peninsula counties of Delaware and Maryland, 1944

State and county	Total value of farm products sold	Value of forest products sold	
	Dollars	Dollars	Percent
In Delaware:			
Kent	$ 9,006,895	$ 7,836	0.1
New Castle	5,645,843	12,215	.2
Sussex	47,600,584	68,171	.1
Total	62,253,322	88,222	0.1
In Maryland:			
Caroline	6,283,578	15,156	0.2
Dorchester	4,293,549	29,880	.7
Kent	3,598,830	6,072	.2
Queen Annes	5,095,038	5,849	.1
Somerset	5,739,746	41,991	.8
Talbot	4,224,134	23,891	.6
Worcester	14,168,891	38,357	.3
Wicomico	12,218,845	19,126	.2
Total	$55,622,611	$180,322	0.3
All counties	$117,875,933	$268,544	0.2

Source: Census of Agriculture 1945.

Table 5:--Average per-farm value of forest products sold by farms in Del-Mar-Va Peninsula counties of Delaware and Maryland, 1944

State and county	Farms selling forest products	Value per farm	Value per acre of total woodland
	Number	Dollars	Dollars
In Delaware:			
Kent	34	$230	$0.10
New Castle	17	719	.39
Sussex	94	729	.54
Total or average	145	$608	$0.38
In Maryland:			
Caroline	62	244	0.29
Dorchester	80	374	.44
Kent	13	467	.24
Queen Annes	25	234	.13
Somerset	41	1,024	1.21
Talbot	39	613	.63
Worcester	36	1,065	.66
Wicomico	41	466	.51
Total or average	337	$ 535	$0.50
All counties	482	$ 557	$0.45

Source: Census of Agriculture 1945.

Table 6:--Number of farms with woodland acreage, number selling forest products in 1944, percent of those having woodlands that sold forest products in 1944, Del-Mar-Va Peninsula counties of Delaware and Maryland

State and county	Farms with woodland acreage	Farms selling forest products in 1944	
	Number	Number	Percent
In Delaware:			
Kent	1,841	34	2
New Castle	1,050	17	2
Sussex	3,007	94	3
Total	5,898	145	2
In Maryland:			
Caroline	1,484	62	4
Dorchester	1,233	80	6
Kent	496	13	3
Queen Annes	894	25	3
Somerset	703	41	6
Talbot	762	39	5
Worcester	1,044	36	3
Wicomico	1,135	41	4
Total	7,751	337	4
All counties	13,649	482	4

Source: Census of Agriculture 1945

SAMPLE SPECIFICATIONS FOR PILING

1. All piles shall be cut from straight, sound, live timber of the kinds specified, free from wind shakes, cracks, spiral grain, decay or large knots.

2. All limbs shall be trimmed smoothly and the piles cut off squarely at both ends and finished in a workmanlike manner.

3. All measurements are to be made under bark.

4. All piles must be reasonably straight. The deviation of the pile from a straight line drawn from the center of the butt to the center of the small end must not be such that any point on this line falls outside of the pile by more than 1/100 of the length of the pile. No sharp bends, crooks, or swelled butts will be accepted.

5. Piles must not be more than 20 inches in diameter at any point and must measure at least 12 inches on the smallest axis 2 feet from the butt in piles up to 55 feet in length, and at least 14 inches on the smallest axis 2 feet from the butt in piles 56 feet and more in lengths.

6. All piles must be 14 inches 2 feet from the butt and 2 inch top.

7. Southern yellow pine piles must average at least five rings of annual growth per inch in the third, fourth, and fifth inches from the pith.

8. The sapwood in the southern yellow pine piles must be less than 3 inches deep at the butt when for use untreated.

9. The sapwood in southern yellow pine piles must be 3 inches deep or more at the butt when for use treated.

10. Southern yellow pine piles for use treated shall have their outer bark removed for the entire length of the pile and the inner bark for one-half their length, viz., from the butt to the middle of the pile.

11. White oak piles must be cut during the winter months when the sap is down.

12. Red oak and spruce piles may be cut at any season of the year.

SAMPLE SPECIFICATIONS FOR CONTAINER VENEER LOGS

White Tulip Poplar And Elm

Grade No. 1--Wood must be clean and clear, no more than two 5-inch knots or comparable defects in 12 inches to 16 inches of log length.

Lengths: 10½ feet, 16 feet, and 21 feet or 62-inch blocks.

Minimum top diameter: 12 inches.

Grade No. 2.--Logs that will not grade No. 1 and that are 50 percent usable.

Lengths: as above

Minimum top diameter: 10 inches.

Young Sap Sweet Gum (white wood)

Must have small heart, not more than 6 inches in diameter.

Lengths: 10½ feet, 16 feet, 21 feet or 62-inch blocks.

Minimum diameter: 10 inches small end. Very select material straight grained.

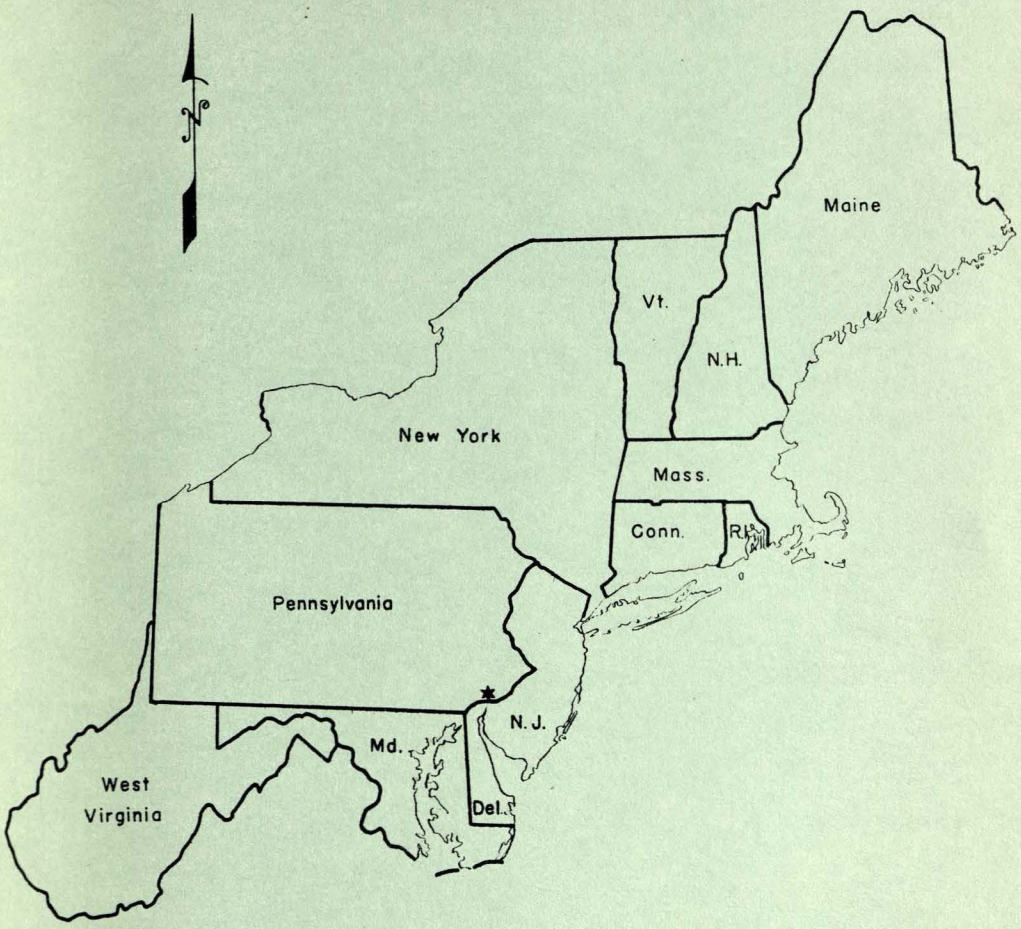
Sweet Gum, Black Gum, And Maple

Grade No. 1.--Lengths: 12 feet, 14 feet, 16 feet, 45 inches or 50 inches.

Minimum diameter, small end: 12 inches

Grade No. 2.--Lengths: 12 feet, 14 feet, 16 feet, or 50 inches.

Minimum diameter: 10 inches.



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